AMENDMENTS TO THE CLAIMS

In The Claims

1-22. (Cancelled)

23. (Currently Amended) A method for reading data stored in a multi-port register file memory having [a plurality of] at least one storage element[s arranged in rows and columns] having at least one memory cell, the method comprising:

[selecting one of the storage elements;]

flowing a current through at least one transistor of the at least one memory cell in the [selected] at least one storage element;

causing an output of a sense amplifier, said sense amplifier having at least one trip-level-shifted inverter device and being connected to the at least one [of said selected] memory cell[s], to switch accessed data to full CMOS logic levels.

24. (New) The method of Claim 23 comprising detecting a current using at least said sense amplifier.

25. (New) The method of Claim 24 comprising said sense amplifier outputting a voltage corresponding to said detected current.

26. (New) The method of Claim 23 comprising operating at least the multi-port register file memory asynchronously.

27. (New) The method of Claim 23 comprising operating at least the multi-port register file memory synchronously.

28. (New) A method for improving speed and increasing performance in a multi-port register file memory having at least one storage element, the method comprising differentially sensing a small voltage swing in the multi-port memory using a two-stage analog-style sense amplifier including at least one trip-level-shifted inverter device.

29. (New) The method of Claim 28 comprising operating the multi-port register file memory asynchronously.

30. (New) The method of Claim 28 comprising operating the multi-port register file memory synchronously.

31. (New) The method of Claim 28 comprising sensing said small voltage swing that is at least a portion of a total voltage supply.

32. (New) The method of Claim 31 wherein said small voltage swing is about 100 millivolts.

33. (New) The method of Claim 31 wherein said small voltage swing is defined relative to a top rail of a voltage supply.

34. (New) The method of Claim 28 wherein said two-stage analog-style sense amplifier includes at least one amplifier enhancing device.

35. (New) The method of Claim 28 comprising turning off power to said two-stage analog-style sense amplifier using at least one power switch.

36. (New) The register file memory of Claim 28 wherein said two-stage analog-style sense amplifier includes a voltage reference device.